

FUSULINA GRACILIS MEEK, 1864 (FORAMINIFERIDA): PROPOSED
INVALIDATION OF NEOTYPE-MATERIAL, DESIGNATION AS TYPE-
SPECIES OF *EOPARAFUSULINA* COOGAN, 1960, AND RELATED
ACTIONS. Z.N.(S.) 1794

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Thompson and Wheeler (1946, p. 31) designated a "neoholotype" (fig. 1) and "neoparatypes" for *Fusulina gracilis* Meek (1864, p. 4, pl. 2, figs. 1, 1a-1c) from presumed topotype specimens collected in the Lower Permian McCloud Limestone of northern California because "Meek's original specimens apparently are irretrievably lost." Coogan (1960, p. 262) named this species type-species of his subgenus *Eoparafusulina* and refigured (*op. cit.*, pl. 23, fig. 4) one of the "neoparatypes" of Thompson and Wheeler (1946, p. 1, fig. 9). Skinner and Wilde (1965, p. 73) elevated *Eoparafusulina* to generic status and argued (*op. cit.*, p. 74) that the neotype for *E. gracilis* could not be conspecific with the type-material described by Meek because of size differences. Therefore, Skinner and Wilde (1965, p. 77) referred the neotype of *E. gracilis*, as well as other specimens, to a larger associated species which they named *E. thompsoni*. They erroneously assumed *E. thompsoni* to be a replacement name for *E. gracilis*, whereas it actually was a new species for which no holotype was designated.

2. Skinner and Wilde (1965, p. 74) also considered *E. gracilis* to be the type-species of *Eoparafusulina* Coogan, 1960 and referred *E. gracilis* of Coogan (1960, p. 262, pl. 23, fig. 4) to *E. thompsoni*.

3. The type-materials of many of Meek's (1864) species have been found in the Museum of Comparative Zoology, Harvard University. Among these is a fusulinid (fig. 4) clearly designated "No. 1, *Fusulina gracilis* Meek" by a handwritten label glued to the specimen. Although now broken, this specimen seems to have served for Meek's (1864, pl. 2) figures 1 and 1a of *Fusulina gracilis*. In the same collection, a block with a polished surface showing several sections of fusulinids bears a label which reads "25 sections of *Fusulina robusta*, Meek & *Fusulina gracilis*, Meek." None of these sections is axial or saggital.

4. A thin section (fig. 5), somewhat tangential to the axial plane, prepared by the writer from the syntype labelled "No. 1, *Fusulina gracilis* Meek" shows it to be closely comparable to Skinner and Wilde's (1965, p. 76) redescription of *Eoparafusulina gracilis* and much smaller than *E. thompsoni*. This confirms their contention (*op. cit.*, p. 74) that *E. gracilis* of Thompson and Wheeler (1946, p. 31) and Coogan (1960, p. 262) and *E. gracilis* Meek are not conspecific.

5. In the interest of partially resolving these problems, the writer desires here:

- (a) to designate the syntype labelled "No. 1, *Fusulina gracilis* Meek" (figs. 4, 5) as lectotype of *Eoparafusulina gracilis* (Meek, 1864). The thin section prepared from this specimen will be filed in the Museum of Comparative Zoology, Harvard University, as type no. 3298.

(b) to designate the syntype (fig. 2) shown in figure 18, plate 34, by Skinner and Wilde (1965) as lectotype of *Eoparafusulina thompsoni* Skinner and Wilde (1965, p. 77). This specimen was suggested for lectotype by Skinner (*in litt.*, Nov. 4, 1966). It is assumed that ICZN Article 72(d) is inapplicable in this instance, as *E. thompsoni* is not a replacement name. Other syntypes in this series are designated paralectotypes. The specimens are now at Humble Oil and Refining Company, Midland, Texas, but will be deposited in the palaeontological collections of the University of Kansas (Skinner, *in litt.*, Nov. 21, 1966).

6. To permit the above actions and stabilize the nomenclature in accordance with its rules, the International Commission on Zoological Nomenclature is requested:

- (1) to invalidate the neotype and "neoparatypes" erected by Thompson and Wheeler (1946, p. 32) for *Eoparafusulina gracilis* (Meek, 1864), in accordance with ICZN Article 75 (f);
- (2) to confirm *Fusulina gracilis* Meek, 1864, as type-species of *Eoparafusulina* Coogan, 1960, in accordance with ICZN Article 70 (a) (iii);
- (3) to place the generic name *Eoparafusulina* Coogan, 1960 (gender : feminine), type-species, by original designation, *Fusulina gracilis* Meek, 1864, on the Official List of Generic Names in Zoology;
- (4) to place the following specific names on the Official List of Specific Names in Zoology:
 - (a) *gracilis* Meek, 1864, as published in the binomen *Fusulina gracilis*, as interpreted by the lectotype designated in para. 5 (a) above (type-species of *Eoparafusulina* Coogan, 1960);
 - (b) *thompsoni* Skinner and Wilde, 1965, as published in the binomen *Eoparafusulina thompsoni*, as interpreted by the lectotype designated in para. 5 (b) above.

REFERENCES

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- SKINNER, J. W., and WILDE, G. L. 1965. Permian biostratigraphy and fusulinid faunas of the Shasta Lake area, northern California. *Univ. Kans. Paleont. Contr., Protozoa* 6 : 1-98, pls. 1-65, 3 figs.
- THOMPSON, M. L., and WHEELER, H. W. 1946. Permian fusulinids of northern California. *in* THOMPSON, M. L. *et al.* 1946. Permian fusulinids of California. *Geol. Soc. America, Mem.* 17 : 21-36, pls. 1-9, text-fig. 3

Plate I

- FIG. 1. *Eoparafusulina thompsoni* Skinner and Wilde, 1965.
(=*E. gracilis* neotype of Thompson and Wheeler, 1946). Axial section. x10.
- FIG. 2. *E. thompsoni* Skinner and Wilde, lectotype, here designated. Axial section. x10.
- FIG. 3. *E. gracilis* Meek, 1864. Hypotype of Skinner and Wilde, 1965. Axial section. x10.
- FIG. 4. *E. gracilis* Meek, 1864, lectotype, here designated. Approx. x1.
- FIG. 5. *E. gracilis* Meek, 1864, lectotype (at arrow), tangential axial section. Other fusulinids are *Pseudoschwagerina robusta* (Meek, 1864) and *Pseudofusulinella occidentalis* Thompson and Wheeler, 1946. x10.